The Effect of Senolytic Drugs on the Brain Shape or Functional Ability of Alzheimer Tau Drosophila

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Alzheimer's disease is the most common form of dementia that has no known cure. Many scientists believe that the disease results from toxic changes in the brain that include large deposits of proteins, which form tau tangles and amyloid plaques. The accumulation of tau-containing neurofibrillary tangles are aligned with cellular loss and cognitive decline. The purpose of the experiment was to determine the effect of senolytics as drugs targeting senescent cells in the Alzheimer Tau fruit flies, by observing their postmortem AD brain through MRI brain imaging and histopathological analyses. Senolytic Drug powder was used and extracts were prepared using Ethanol. Fruit fly activity was measured separately for males and females of wild type and Tau flies. The drug was added to the food of the flies in each category, along with a control. The righting time, climbing time and the lifespan were recorded to test functional ability. The eye color shade change along with the accumulation of tau tangles throughout the trial were also measured. Senolytic Drug extract provided a strong improvement in the decreasing the rate of the eye color change, concentration of tau tangles throughout the brain, and overall physical health. The average improvements of the drug were 41% where improvements due to Control was only 12%. The data suggests that Senolytic Drugs may benefit Alzheimer's disease, as the drug extract provided a significant effect in reducing the accumulation tau tangles in brain tissue, decreasing the eye color change, and improving the overall health of Tau Flies.

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